**CPU0** **CPU1**

MS thread   Shared Memory via common process   Streaming Engine thread

Linux Kernel

IP Stack

Linux Kernel

IP Stack

Device drivers

Ge driver

**Intel MP Spec conformant platform**
Dual 1-GHz Pentium III mother board w/ 2x 100
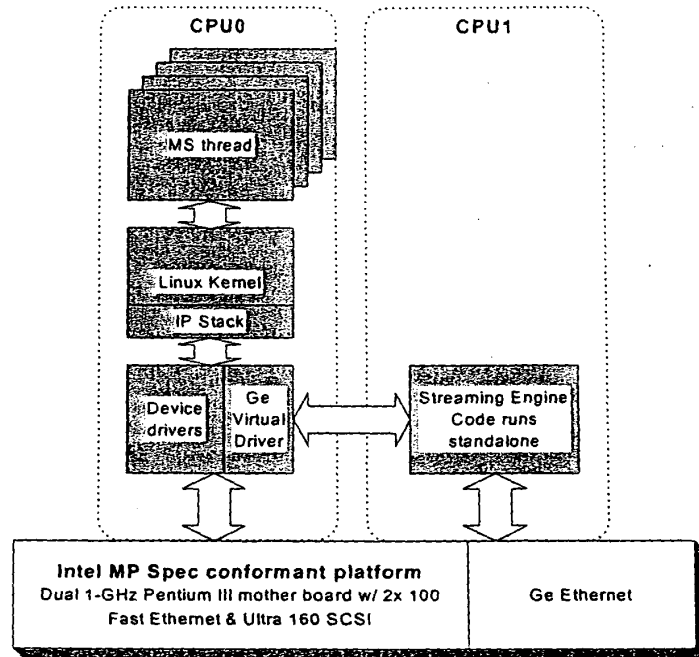Fast Ethernet & Ultra 160 SCSI

Ge Ethernet

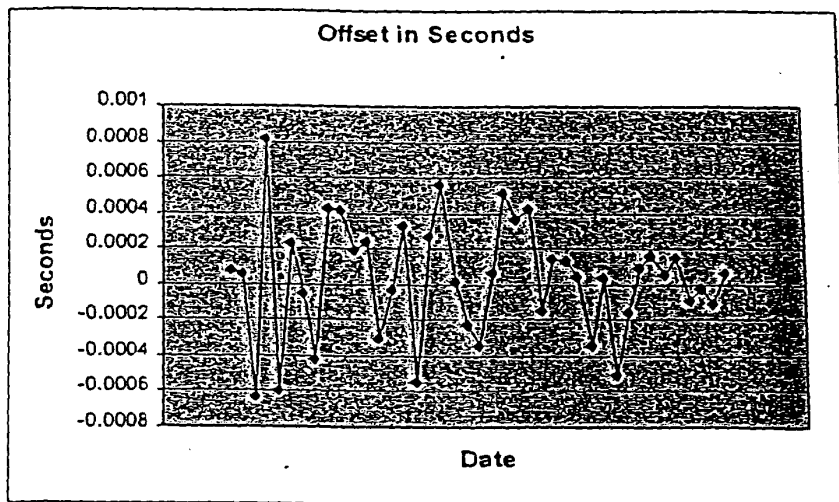**Figure 1 - Linux SMP host**

**Figure 2 - Uni-processor Linux**

**FIG. 3** — **Offset in seconds from time source**
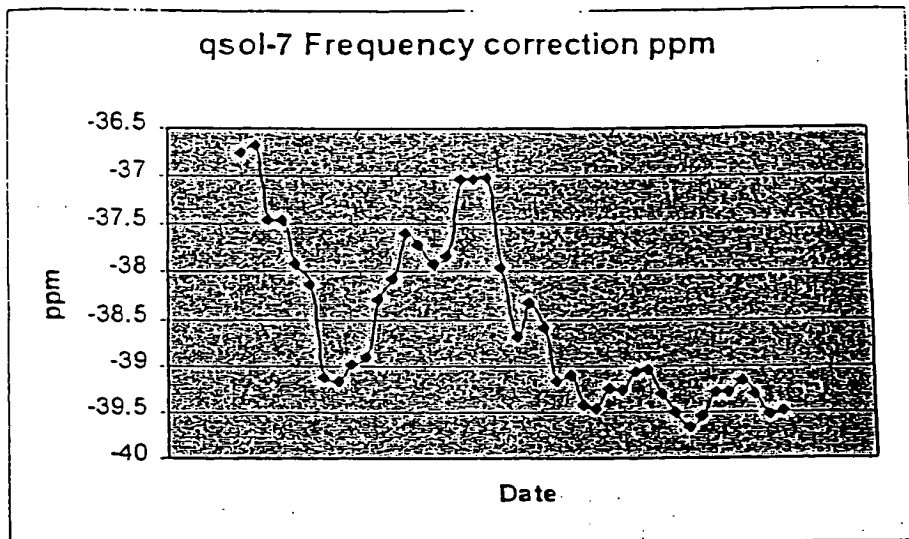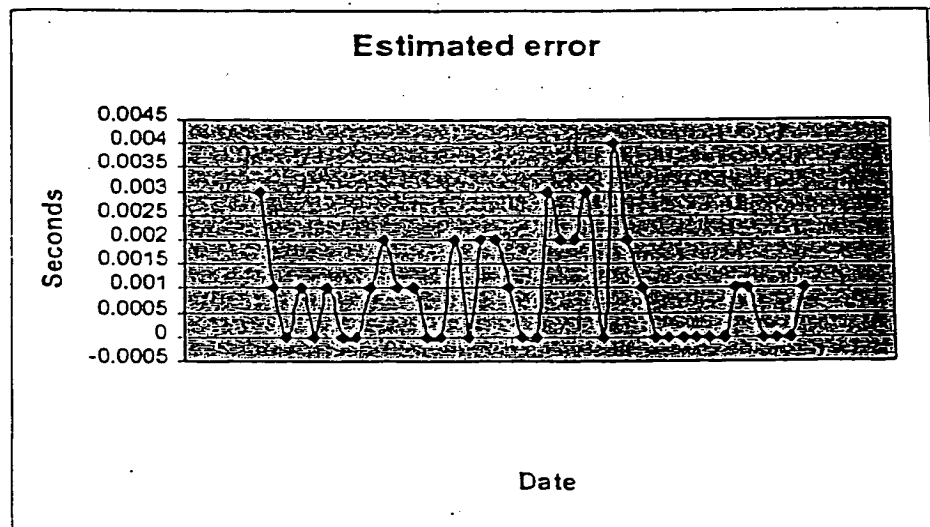
FIG 4 - **Frequency correction in ppm**



FIG 5 - **Estimated error in seconds**
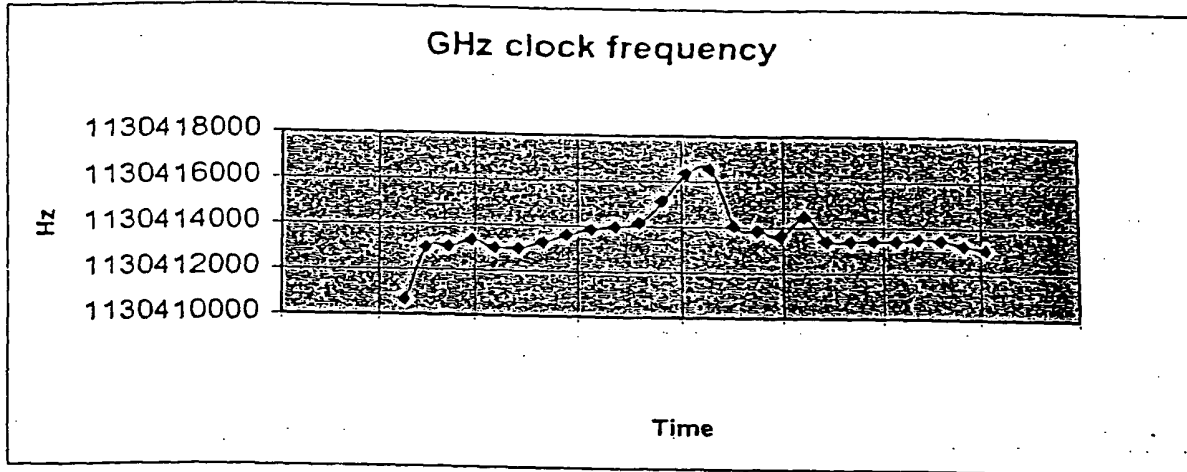
FIG. 6 - GHz Clock Frequency
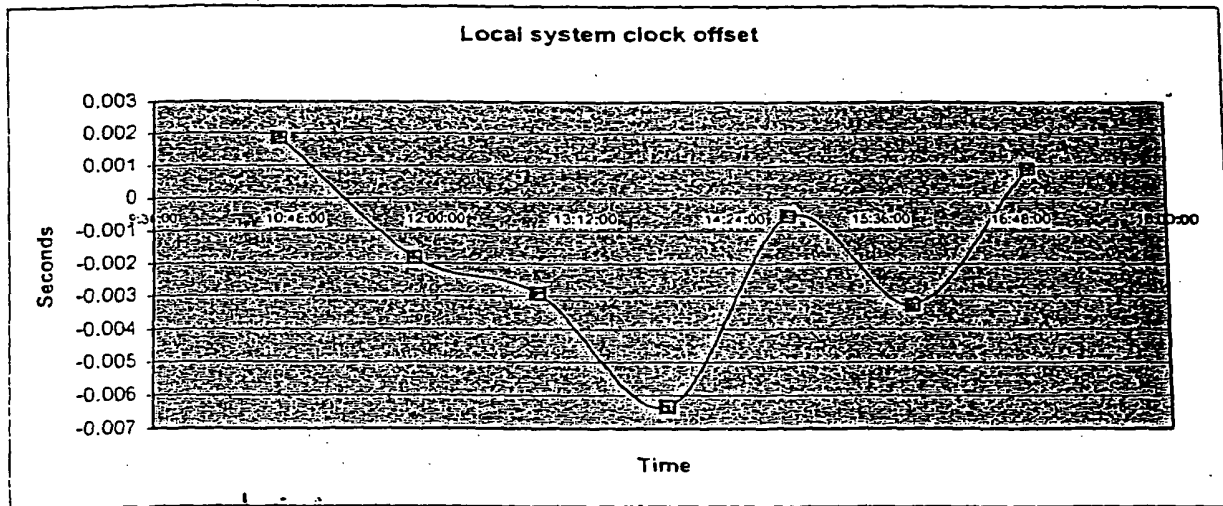


FIG. 7 - Local System Clock Offset
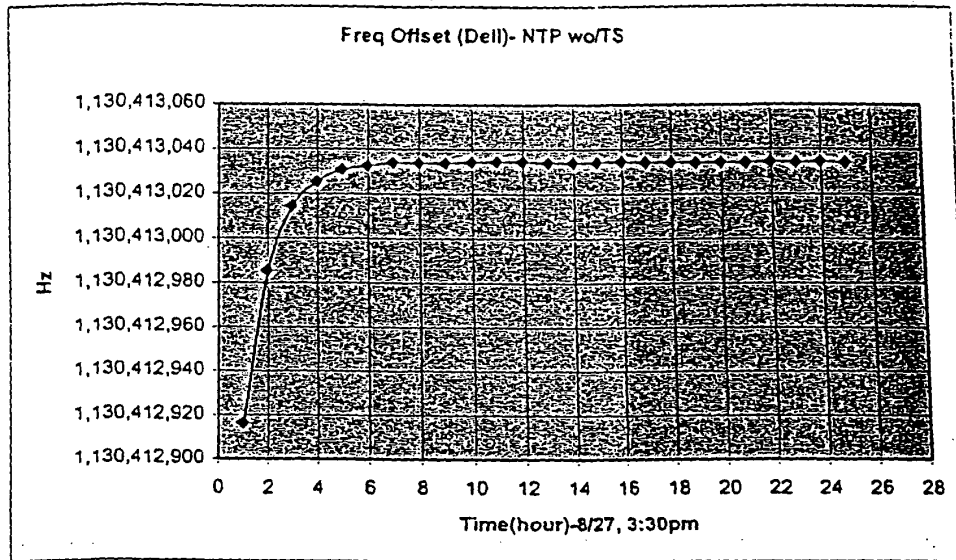
**Freq Offset (Dell)- NTP wo/TS**

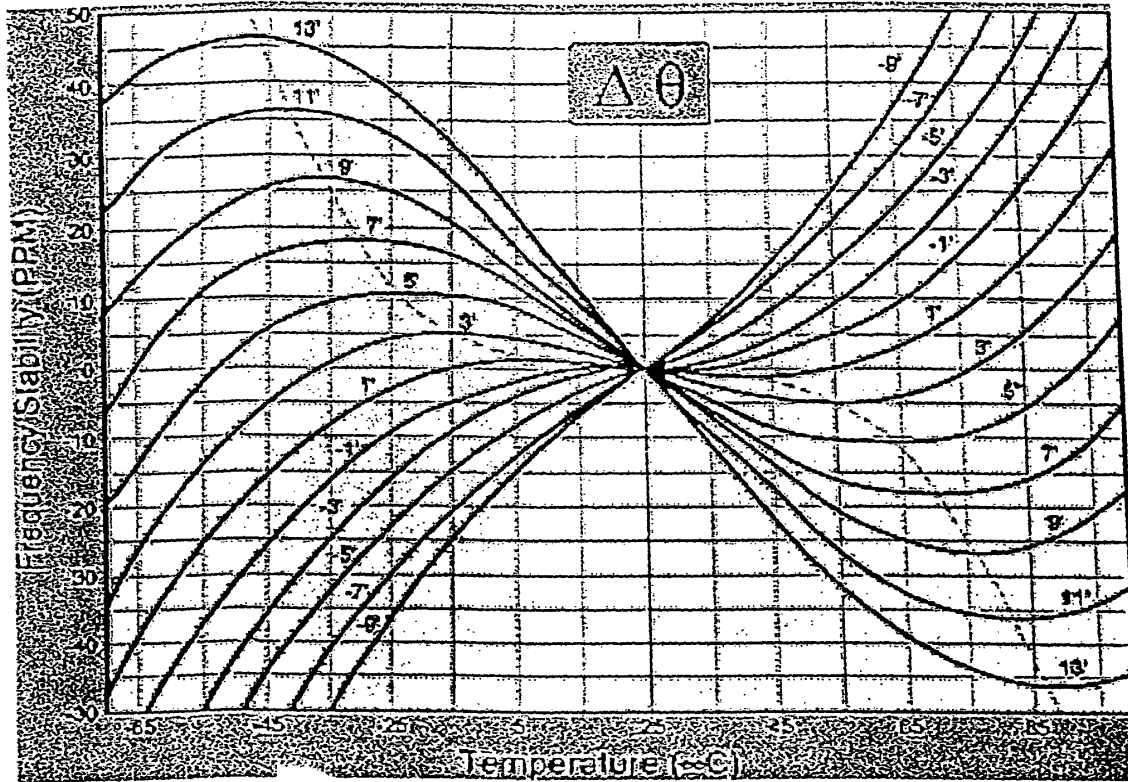*FIG. 8*   NTP correction after timeserver removed

FIG. 9 - Crystal drift with temperature
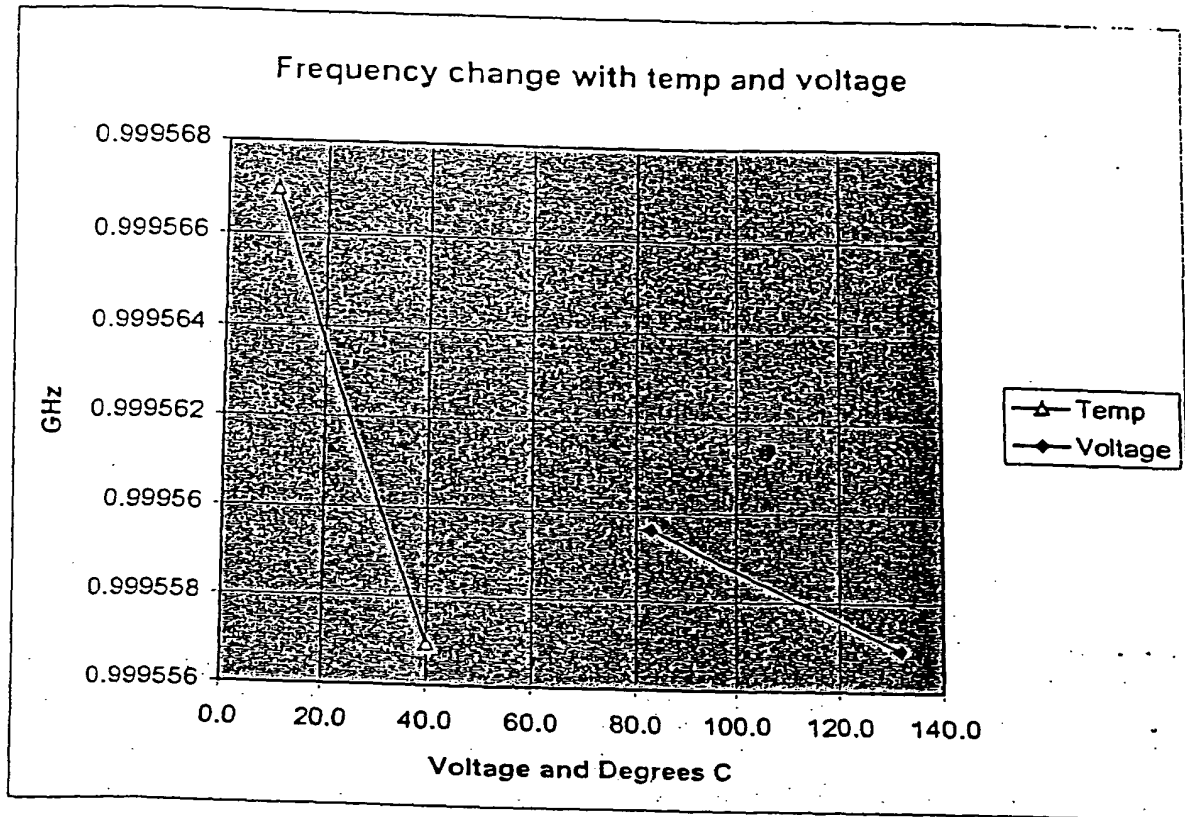
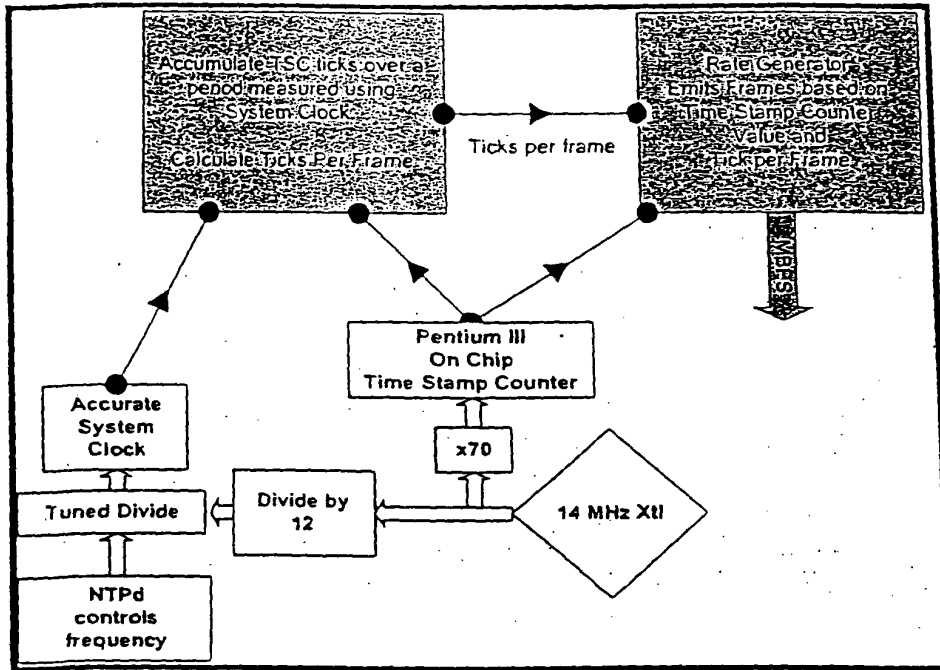FIG. 10 - Change of frequency with Temperature and Supply voltage
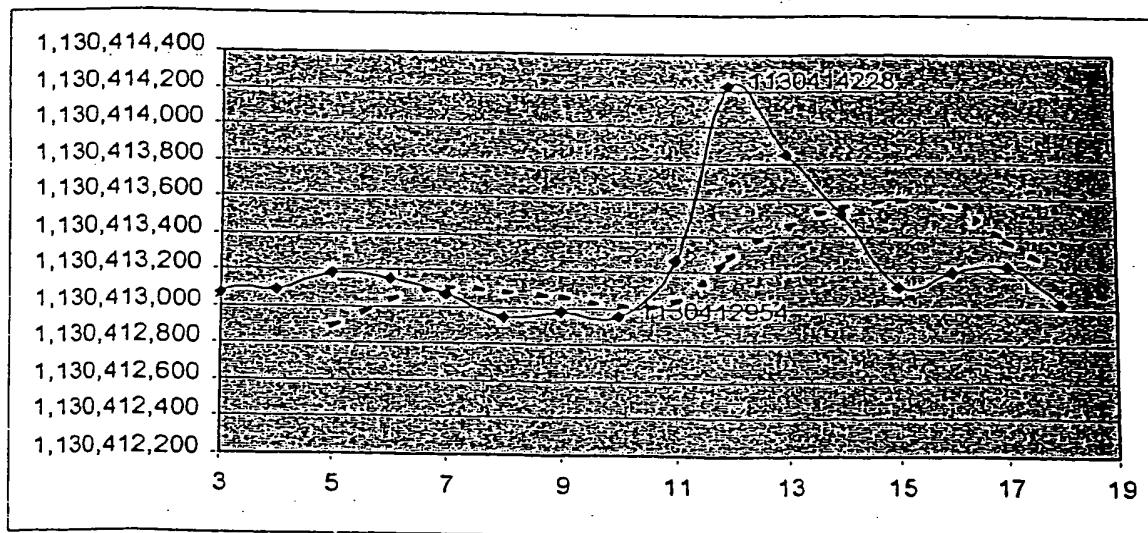
FIG. 11 - Rate controller control loop

Applicant: Cleary, Brown
Title: Low Cost, Highly Accurate Video
Server Bit-Rate Compensation
Docket: DIVA/993



FIG. 12 - Low pass filter of GHz crystal measurements

START ~1301

PARTITION VIDEO SERVER PROCESSES ~1305

ASSOCIATE EACH OF A PLURALITY OF PROCESSING ELEMENTS WITH AT LEAST ONE RESPECTIVE PROCESS ~1310

ASSIGN PRIORITY TO PROCESSING ELEMENTS ACCORDING TO A HIERARCHY OF VIDEO SERVER PROCESSES ~1315

MONITOR TIMING PARAMETERS, OPERATING PARAMETERS AND SYSTEM LOADING ~1320

ADJUST HIERARCHY ACCORDING TO MONITORED TIMING PARAMETERS, CHANGES IN SYSTEM LOADING OR OPERATING CONDITIONS, AND/OR OPERATING SYSTEM SCHEDULER REQUIREMENTS ~1325

ADJUST ASSOCIATIONS IN RESPONSE TO PROCESSING ELEMENT LOADING, MONITORED TIMING PARAMETERS, CHANGES IN SYSTEM LOADING OR OPERATING CONDITIONS, AND/OR SCHEDULER REQUIREMENTS ~1330

1300

FIG 13

INPUT OUTPUT CIRCUIT 1410

SUPPORT CIRCUITRY 1420

PROCESSOR 1430

1400

MEMORY 1440

PROGRAMS 1442

FIG. 14